

WHAT IS CLAIMED IS:

1. A stable, sterile gelled composition which comprises:  
a matrix containing a negative charged polymer having a mean  
average molecular weight between about 650,000 and 800,000  
blended with a nonionic polymer, wherein the molar ratio of the  
charged polymer to the nonionic polymer is 1:0.5 to 4 and the  
negative charged polymer is present in amounts of about 2.0% to  
about 3.5% by weight.

2. The gelled composition of claim 1, wherein the negative  
charged polymer is selected from the group consisting of  
polysulfated glucosoglycans, glucosaminoglycans,  
mucopolysaccharides, and derivatives thereof.

3. The gelled composition of claim 1, wherein the negative  
charged polymer is a mucopolysaccharide polymer having an average  
molecular weight between about 700,000 to about 775,000.

4. The gelled composition of claim 3, wherein the negative  
charged polymer is chondroitin sulfate or the hyaluronate salt  
of sodium, calcium, potassium or magnesium.

5. The gelled composition of claim 1, wherein the nonionic  
polymer is selected from the group consisting of  
carboxymethylcellulose sodium, hydroxyethyl cellulose,  
hydroxypropyl cellulose and mixtures thereof.

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6. The gelled composition of claim 1, wherein the molar ratio of the polymers is 1:0.5 to 2.

7. The gelled composition of claim 1, wherein the molar ratio of the polymers is 1:0.7 to 2.5.

8. The gelled composition of claim 1, wherein the negative charged polymer is present in amounts of about 2.0% to about 3.0% by weight.

7.36 9. The gelled composition of claim 1, wherein the nonionic polymers are present in amounts of about 0.1% to about 1.5% by weight. ? and tested

10. A method for the treatment of a condition in animals for a sustained period of time, which comprises:

topically applying a therapeutically effective dose of a gelled composition comprising a polymer matrix which is suspended in a liquid medium; wherein the polymer matrix contains a negatively charged polymer blended with a nonionic polymer.

7.36 11. The method of claim 10, wherein the negatively charged polymer material is selected from the group consisting of glucosaminoglycans, mucopolysaccharides and mixtures thereof.

12. The method of claim 10, wherein the negative charged polymer material is chondroitin sulfate or hyaluronate salt of sodium, calcium, potassium or magnesium.

13. The method of claim 12, wherein the material has a mean average molecular weight below about 800,000.

14. The method of claim 12, wherein the material has a mean average molecular weight between 700,000 and 775,000.

15. The method of claim 12, wherein the hyaluronate salt is the sodium salt and has a mean average molecular weight from about 650,000 to about 800,000, a sulphated ash content below about 15%, a protein content below about 5% and purity of at least 98%.

16. The method of claim 10, wherein the nonionic polymer is selected from the group consisting of carboxymethylcellulose sodium, hydroxyethyl cellulose, hydroxypropyl cellulose and mixtures thereof.

17. The method of claim 10, wherein the gelled composition also contains a therapeutically effective amount of drug in the gelled composition which composition is administered to treat acute, chronic or intractable diseases or conditions.

18. The method of claim 10, wherein the therapeutically effective dose penetrates the skin layers to alleviate the pain without significantly modifying motor or sensory functions.

19. The method of claim 10, wherein the condition treated is pain associated with or caused by abnormal cell growth, cancer, tumor mass, arthritis, degenerative joint disease (osteoarthritis), sickle cell disease, hemophilia, pinched nerve,  
5 or damaged nerve and muscle and dermatologic disorders.

20. The method of claim 19, wherein the pain is located in joints, ligaments, tendons, cartilage or muscle.

10 21. (A process for the use of) a composition as a medical device, for drug delivery, the application of a diagnostic agent, or the prevention of post operative adhesions, said process comprises topically administering to a mammal an aqueous based gelled composition containing a polymer matrix composed of  
15 negatively charged polymers blended with nonionic polymers.

22. The process of claim 21, wherein the negatively charged polymer material is selected from the group consisting of glucosaminoglycans, mucopolysaccharides and mixtures thereof.

20 23. The process of claim 21, wherein the negative charged polymer material is chondroitin sulfate or hyaluronate salt of sodium, calcium, potassium or magnesium.

25 24. The process of claim 21, wherein the material has a mean average molecular weight below about 800,000.

25. The process of claim 21, wherein the material has a mean average molecular weight between 700,000 and 775,000.

26. The process of claim 21, wherein the hyaluronate salt is the sodium salt and has a mean average molecular weight from about 650,000 to about 800,000, a sulphated ash content below about 15%, a protein content below about 5% and purity of at least 98%.

27. The process of claim 21, wherein the nonionic polymer is selected from the group consisting of carboxymethylcellulose sodium, hydroxyethyl cellulose, hydroxypropyl cellulose and mixtures thereof.

28. The process of claim 21, wherein the composition also contains an active therapeutic agent or drug.

29. An antiarthritic gelled composition, which comprises: therapeutically effective amounts of an active NSAID drug dispersed within a matrix containing a negative charged polymer having a mean average molecular weight between about 650,000 and 800,000 blended with a nonionic polymer, wherein the molar ratio of the charged polymer to the nonionic polymer is 1:0.5 to 4 and the negative charged polymer is present in amounts of about 2.0% to about 3.0% by weight.

30. The gelled composition of claim 29, wherein the negative charged polymer is a mucopolysaccharide polymer having an average molecular weight between 700,000 to 750,000.

5 31. The gelled composition of claim 29, wherein the charged polymer is the hyaluronate salt of sodium, calcium, potassium or magnesium.

10 ~~32.~~ The gelled composition of claim ~~29~~<sup>1</sup>, wherein the nonionic polymers are selected from the group consisting of carboxymethylcellulose sodium, hydroxyethyl cellulose, hydroxypropyl cellulose and mixtures thereof.

15 ~~33.~~ The gelled composition of claim ~~29~~<sup>1</sup>, wherein the molar ratio of the polymers is 1:0.7 to 2.5.

20 ~~34.~~ The gelled composition of claim 29, wherein the negative charged polymer is present in amounts of about 2.0% to about 3.0% by weight.

35. The gelled composition of claim 29, wherein the nonionic polymers are present in amounts of about 0.2 to 1.0% by weight.

25 ~~36.~~ The gelled composition of claim ~~29~~<sup>1</sup>, wherein the NSAID is selected from the group consisting of naproxen, acetaminophen, ibuprofen, flurbiprofen, ketoprofen, phenacetin, salicylamide, indomethacin and mixtures thereof.

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37. A method for treating an arthritic condition, which comprises: topically administering to a mammal an aqueous based gelled composition containing therapeutically effective amounts of an NSAID drug dispersed within a polymer matrix composed of negatively charged polymers blended with nonionic polymers, wherein the molar ratio of the negatively charged polymer to nonionic polymer is 1:0.5 to 4.

38. The method of claim 37, wherein the negative charged polymer is selected from the group consisting of polysulfated glucosoglycans, glucosaminoglycans, mucopolysaccharides, and derivatives thereof.

39. The method of claim 37, wherein the negative charged polymer is a mucopolysaccharide polymer having an average molecular weight between about 700,000 to about 775,000.

40. The method of claim 37, wherein the negative charged polymer is chondroitin sulfate or the hyaluronate salt of sodium, calcium, potassium or magnesium.

41. The method of claim 37, wherein the nonionic polymer is selected from the group consisting of carboxymethylcellulose sodium, hydroxyethyl cellulose, hydroxypropyl cellulose and mixtures thereof.

42. The method of claim 37, wherein the molar ratio of the polymers is 1:0.7 to 2.5.

*See*  
43. The method of claim 37, wherein the negative charged polymer is present in amounts of about 2.0% to about 3.0% by weight.

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44. The method of claim 37, wherein the nonionic polymers are present in amounts of about 0.1% to about 1.5% by weight.

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